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November 11, 2009

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Duke Energy Carolinas, LLC  
William States Lee III Nuclear Station - Docket Nos. 52-018 and 52-019  
AP1000 Combined License Application for the  
William States Lee III Nuclear Station Units 1 and 2  
Response to Request for Additional Information  
Ltr# WLG2009.11-03

Reference: Letter from B.J. Dolan to Document Control Desk, Duke Energy Carolinas, LLC, Duke Energy Carolinas, LLC William States Lee III Nuclear Station, Docket Nos. 52-018 and 52-019, AP1000 Combined License Application for the William States Lee III Nuclear Station Units 1 and 2  
Response to Request for Additional Information, Ltr# WLG2008.09-11, ML# 082750078

This letter provides supplemental information to the Duke Energy response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI):

ER RAI 70, Terrestrial Ecology

The response to this NRC request is addressed in the enclosure which also identifies any associated changes that will be made in a future revision of the William States Lee III Nuclear Station application.

If you have any questions or need any additional information, please contact Peter S. Hastings, Nuclear Plant Development Licensing Manager, at 980-373-7820.

Bryan J. Dolan  
Vice President  
Nuclear Plant Development

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NRO

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Enclosure:

- 1) Response to ER RAI 70, Terrestrial Ecology

AFFIDAVIT OF BRYAN J. DOLAN

Bryan J. Dolan, being duly sworn, states that he is Vice President, Nuclear Plant Development, Duke Energy Carolinas, LLC, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this supplement to the combined license application for the William States Lee III Nuclear Station and that all the matter and facts set forth herein are true and correct to the best of his knowledge.

*Bryan J. Dolan*  
Bryan J. Dolan

Subscribed and sworn to me on *November 11, 2009*

*Sam N. Slays*  
Notary Public

My commission expires: *April 19, 2010*



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xc (w/o enclosure):

Loren Plisco, Deputy Regional Administrator, Region II  
Stephanie Coffin, Branch Chief, DNRL  
Robert Schaaf, Branch Chief, DSER

xc (w/ enclosure):

Michelle Moser, Project Manager, DSER  
Brian Hughes, Senior Project Manager, DNRL

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**Lee Nuclear Station Response to Request for Additional information (RAI)**

**RAI Letter Dated:** NA – Teleconference, September 4, 2009

**Reference NRC RAI Numbers:** ER RAI 70 Supplement

**NRC RAI:**

On a teleconference with NRC and Duke Energy, NRC noted that the ground cover areas impacted for Other Construction Facilities did not add up to the reported total area.

**Duke Energy Response:**

The following revisions will be made to the Lee Nuclear Station ER to clarify the areas impacted.

- The significant figures listed for the values represented in Table 4.3-1 were changed to more closely align with the original data used.
- In the “Construction Period” section, the “Other” category values were also revised based upon current understanding of building and feature use. These revisions affected each cover type listed in the table since acreage values were reassigned from the “Other” category to listed categories.
- A pipeline right-of-way that connects Make-Up Pond B to Make-Up Pond A was added to the “Intake/Discharge Structures and Pipelines” row in the “Permanent Facilities” section of the table.
- Also in the “Permanent Facilities” section, the “Simulator Training and Warehouses” and “Other” categories’ values were revised based upon current understanding of building use.
- The “Estimated Total Acreage” column was summed from the “Cover Type” columns. The Subtotal, Total, and Percent of Total rows were revised.

**Associated Revisions to the Lee Nuclear Station Combined License Application:**

1. Revise COLA Part 3, ER Chapter 4, Subsection 4.3.1.1.1, Paragraphs 1 and 2, as follows:

Figure 4.3-1 is an overlay of the construction footprint of the Lee Nuclear Station on the ecological type map (Figure 2.4-1). Figure 4.3-2 is an overlay of permanent facilities on the ecological type map. Analysis of the effects of the footprint on ecological types suggests that temporary and long-term alteration and loss of about ~~270~~ 280 acres (ac.) of habitat (Table 4.3-1) is the primary effect on vegetation resulting from new construction at the site. However, this analysis also indicates that construction and support areas contain no old growth timber, unique or sensitive plants, or unique or sensitive plant communities. Most of the construction is expected to occur in previously disturbed areas with low habitat value (labeled OFM and USC in Table 4.3-1) and does not, therefore, noticeably reduce the local diversity of plants and plant communities.

The Mixed Hardwood (MH), Mixed Hardwood-Pine (MHP), ~~and~~ Pine-Mixed Hardwood (PMH) and Pine (P) cover types are upland forests of good quality habitat. They account for less than ~~15~~ 10 percent (see Table 4.3-1) of the area to be disturbed. They occur mainly in the borrow and spoils areas and along the intake and discharge pipeline ROWs (see Figures 4.3-1 and 4.3-2). The boundaries of these and other vegetated areas subject to clearing and grubbing will be prominently marked prior to site preparation. Merchantable timber within marked areas may be

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harvested. Merchantable timber occurs only in areas of the MH, MHP, and PMH cover types (see Table 4.3-1). Remaining trees will then be felled. Stumps, shrubs, and saplings will be grubbed, and groundcover and leaf litter will be cleared to prepare the land surface for grading.

2. Revise COLA Part 3, ER Chapter 4, Subsection 4.3.1.1.1, Paragraph 5, as follows:

The Open/Field/Meadow (O/F/M) and Upland Scrub (USC) cover types are nonforested or partially forested early successional areas dominated by small trees, shrubs, grasses, herbs, or bare soil maintained by cattle grazing and/or mowing. Analysis indicates that about ~~75~~ 78 percent (see Table 4.3-1) of the temporary and permanent facilities at the site are planned for location in these relatively low-quality habitat areas.

3. Revise COLA Part 3, ER Chapter 4, Subsection 4.3.1.1.3, Paragraph 3, as follows:

Long-term or permanent effects can include the loss of forests, forested wetlands, mature riparian habitat, snags used by cavity-nesting species, and vegetative cover used during critical periods (e.g., hiding cover used during nesting or birthing periods). As discussed in Subsection 4.3.1.1.1, high quality forested habitats at the site to be cleared within the construction footprint total about ~~33~~ 27 acres (or less than ~~15~~ 10 percent of the area to be affected [see Table 4.3-1]). This is a permanent impact but is SMALL in relation to the availability of forest habitats on the site and elsewhere in the area.

4. Revise COLA Part 3, ER Chapter 10, Section 10.1.1, Paragraph 2, Third Bullet, as follows:

**Ecological impacts** - loss of ~~270~~ 280 acres (ac.) of wildlife habitat and temporary degradation of aquatic habitat.

5. Revise COLA Part 3, ER Chapter 10, Table 10.1-1, Sheet 1, Land Use, Column 1: Adverse Impacts Based on Duke Energy's Proposal, as follows:

Approximately ~~270~~ 220 ac. of previously disturbed land, labeled OFM and USC in Table 4.3-1, is altered and converted during construction, with the potential for erosion. A small amount of previously undeveloped, undisturbed land would not be available for other uses.

6. Revise COLA Part 3, ER Chapter 10, Table 10.1-1, Sheet 1, Land Use, Column 3: Unavoidable Adverse Impacts, as follows:

~~270~~ 220 ac. of previously disturbed habitat, labeled OFM and USC in Table 4.3-1, is temporarily or permanently altered by the construction of the Lee Nuclear Station. Two acres of prime farmland is occupied on a long-term basis by the nuclear power plant and associated infrastructure.

7. Revise COLA Part 3, ER Chapter 10, Table 10.1-1, Sheet 3, Ecological/Terrestrial, Column 3: Unavoidable Adverse Impacts, as follows:

Loss of ~~270~~ 280 ac. of habitat for wildlife species.

8. Revise COLA Part 3, ER Chapter 10, Subsection 10.4.2.2.1, Paragraph 1, as follows:

Loss of habitat is one of the costs of constructing the Lee Nuclear Station. The station is slated to occupy about ~~270~~ 280 ac. of the 1900-ac. Lee Nuclear Site. Most of the land occupied by facility structures had been cleared during previous construction. Most of the remaining land use is open fields and meadows. A detailed description of land-use impacts is provided in Section 4.1.

9. Revise COLA Part 3, ER Chapter 10, Table 10.4-3, Sheet 1, External Costs, Land and Land Use, as follows:

Lee Nuclear Station alters about ~~270~~ 280 ac. of the 1900-ac. site. No additional land is being purchased for Lee Nuclear Station. A large portion of the land utilized by new structures was

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cleared during previous construction at the site. There is some land cover change, for example, loss of open fields and meadows. This results in SMALL impacts.

10. Revise COLA Part 3, ER Chapter 10, Table 10.4-4, Sheet 3, Land and Land Use, Column 3: Costs, as follows:

Lee Nuclear Station alters approximately ~~270~~ 280 ac. of the approximately 1900 ac. site.

11. Revise COLA Part 3, ER Chapter 4, Table 4.3-1, as follows:

**TABLE 4.3-1  
COVER TYPES TO BE CLEARED DURING CONSTRUCTION AT THE LEE  
NUCLEAR SITE**

	Estimated	Cover Type						
	Total Acreage	MH	MHP	PMH	P	NJW	OFM	USC
<b>Construction Period</b>								
Heavy Haul Road and Haul Path	<del>40.94</del> <u>10.5</u>					3.36 2.9	7.658 17.96	
Parking	18.248						18.0	0.22
Laydown	<del>32.66</del> <u>32.7</u>	1.8	0.42	0.01 Less Than 0.1		0	24.659	5.986
Batch Plant	2.81						2.81	
Borrow Area	<del>38.02</del> <u>38.1</u>		3.92	1.876		0.00	30.548	1.86 1.9
Spoils Area	<del>40.02</del> <u>9.9</u>		6.35				3.64	0.03 Less Than 0.1
Other	<del>46.66</del> <u>15.8</u>	0.07 Less Than 0.1	3.92	4.74		2.03 2.5	11.23 13.3	0.86
Subtotal	129.29 <u>128.0</u>	1.85 1.8	14.64 10.6	3.50 1.8		5.439	98.29 100.4	9.83 8.0
<b>Permanent Facilities</b>								
Power Block	31.00					24.32 8	6.72	
Cooling Towers	28.329						28.329	
Switchyard	21.437						21.437	
Meteorological Tower	4.33		2.548	1.85				
Warehouses and other	9.22 <u>7.2</u>	0.04 Less Than 0.1	0.00	0.00		0.00	9.20 7.2	0.00

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Parking	12.74						12.74	
Vehicle Maintenance	3.70						2.549	1.20
		0.02						
		Less						
		Than						
Wastewater Treatment	10.5	0.1	0.00	3.33		1.7	5.546	0.00
								0.02
								Less
								Than
Simulator Training	02.22						02.20	0.1
Clarifier Area	0.14							0.14
Support and Administration	2.97-3.0					1.247	1.8	
Security Training Area	0.33						0.33	
Intake/Discharge Structures and Pipelines (with 75 foot ROW)	46.08-24.7	2.64		2.07			5.26	5.47
		2.6	0.767	2.0	0.2	0.00	12.7	6.5
	140.83	2.64	3.14	7.25		27.24	93.82	6.83
Subtotal	149.4	2.6	3.2	7.1	0.2	5	101.3	7.8
	270.13	4.49	17.75	10.75		32.65	192.12	16.67
Total	277.4	4.4	13.8	8.9	0.2	4	201.7	15.8
		1.7	6.6	4.0		12.0	71.1	6.2
Percent of Total	100	1.6	5.0	3.2	0.1	11.8	72.7	5.7

**Associated Attachments/Enclosures:**

None